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The author proposes his theory on language learning: "...children learn pitch, stress, and juncture along with the more individual voice patterns which we might call tone, much earlier and more easily than they learn segmental phonemes and morphemes." This theory, which the author feels gains some confirmation from the learning processes of animals, is illustrated by observations of the authors' grandaughter between the ages of one and two and a half years. He observes that the very young child, given an environment conducive to learning, seems to learn without being taught. He suggests that every teacher of English (to whom this lecture is particularly addressed) should ask himself seriously (1) Do I understand how language works and how it is learned? (2) What can I trust my students to learn without my help? (3) What can I do to help my students learn what they need most? (AMM)

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# Seen But Not Heard: Language Learning and Language Teaching

Charlton G. Laird



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CHARLTON G. LAIRD has published many books, a sampling of which includes *Laird's Promptory: A Dictionary of Synonyms, Antonyms, and Specific Equivalents; Thunder on the River* (a novel); *The Miracle of Language; The Five Grammars of English;* and *The World through Literature.* His articles have appeared in many popular, professional, and scholarly journals and collections. Now officially retired, Dr. Laird has held such positions as professor and head of the Department of English at the University of Nevada; at present, his post-retirement appointments include that of visiting professor at several universities and various summer institutes and consulting assignments. On his speaking tour were Alaska Methodist University, Anchorage, Alaska; Gadsden State Junior College, Gadsden, Alabama; Mendacino County Schools, Ukiah, California; Mount Marty College, Yankton, South Dakota; Red Bluff Union High School, Red Bluff, California; and University of Alaska, College, Alaska.

Children, according to a hoary but relatively unconfirmed adage, should be seen but not heard. This attitude, I assume, survives from the day when the business of infants was conceived to be avoiding death and the sniffles, being considered cute, and otherwise creating as little nuisance as might be commensurate with their helplessness. The attitude suited a world ordered by and for adults, and it recalls a time when children appeared but little in art, letters, or learning. Children, as children, are almost unknown in European art until the eighteenth century, and when they appear in considerable numbers they flutter about as cupids; the infant Jesus, of course, was common from the Middle Ages on, especially during the cult of the Virgin Mary, but he flourished as Jesus and as an adjunct to the Madonna—artists always had trouble finding something for sitters to do with their hands and would have them holding flowers, the griddles on which they had supposedly been roasted, or even books. Christ was seldom, if ever, painted or carved as an infant, interesting as an infant. Royal children might be painted, of course, partly because they were royal and partly because they wore yards of lace, but artists painted babies badly, probably because they saw nothing interesting in a baby to paint.

Similarly, in letters and learning, children played little part. Even the universal Shakespeare almost ignored children; most of his plays include no characters too young to make war or love. Some children get into *Macbeth* just long enough to be murdered; that is their function in the play, to reveal Macbeth's depravity and to motivate Macduff's revenge. In any real sense, they are not children at all; they seem rather less human than a doll that is capable of saying *Mama* and going to the bathroom. Similarly, adults in Shakespeare's plays, or in any plays except recent ones, had no significant childhoods; Caliban is not treated as revealing the tragedy of a retarded child; Iago did not become a villain because he was jealous of his father or had been toilet-trained too young. Villains were just villains who had sprung, clothed in their villainy, from the brain of the

author. As for learning, fairy tales were not yet evidence of the folk mind, and teachers were untroubled with any formal awareness of child psychology.

All this rightly accorded with notions of the well-being of children as well as the convenience of their parents. Children were something that happened to people, gifts of God, but objects to be treated as gifts, not as human beings. Parents who could afford the luxury had a nursery where children were banished to appear at infrequent intervals or briefly on certain occasions, and, if we are to believe Henry Wadsworth Longfellow's "The Children's Hour," even a professor, at least a professor at Harvard, could afford such luxury. Some children of poor families may have fared better; they had to work, and many of them may have been allowed to chatter while they did so, and such differences in child care may account in part for the fact that some sons of good families grew up to be proper nincompoops, whereas some sons of cottagers displayed unexpected acumen and even literacy. However that may be, I have lately become convinced that the attitude embodied in the proverb about children being unheard is well calculated to stunt mental growth, perhaps especially of an intelligent child.

The last century has witnessed a revolution in our attitudes toward children and in our estimation of their importance. We now study children with care and sympathy, partly for the sake of the children, partly because we now see that children can help us understand both human nature and human society, including human language. As a result, the last half century or so has witnessed dozens of excellent books and monographs on the subject, and just now the question of language acquisition by small children, with conferences here and research grants there, is one of the liveliest in both linguistics and psychology, so lively that although I have not been able to catch anybody else saying quite what I have to say, somebody probably has; if not, somebody is likely to do so before this little paper can see the light of print.[1]

I shall not, however, keep silent for such reasons, and for my

stubborn loquacity I have at least two explanations. I am making no pretense to being scientific; I respect science, and I would willingly study language scientifically insofar as I am able, but I blundered upon the evidence I expect to present to you, and once I had started collecting material I could not go back and assemble data in a controlled way—children refuse to live their lives over again, even in the interests of science. Nor do I expect to embark upon the scientific studies that my tentative conclusions seem to warrant; at my age I can scarcely devote a lifetime to the linguistic concerns of infants, and my interests being what they are I am not likely to make even a good start. I hope my observations may be of some interest to serious students in the field, but I am trying here only to lay the foundation for some observations about language teaching. Before I get to any conclusions, however, let me present some of my evidence, and, since it arises from a highly personal relationship and may be colored thereby, I shall deal frankly with human beings in a human situation.

The subject of my observations is one of my granddaughters, Hanna Jo Hunt, who at this writing is something more than two

[1] Psycholinguistic studies involving children are being pursued so widely that they are now perhaps best surveyed in collections of papers and in the reports of conferences, of which the most recent at this writing is Frank Smith and George A. Miller (eds.), *The Genesis of Language: A Psycholinguistic Approach* (Cambridge, Mass.: Massachusetts Institute of Technology, 1966). Other recent collections include the following: Ursula Bellugi and Roger Brown (eds.), *The Acquisition of Language*, Monographs of the Society for Research in Child Development, 20:1 (1964); Sol Saporta (ed.), *Psycholinguistics: A Book of Readings* (New York: Holt, Rinehart and Winston, 1961), which includes a reprint, with bibliography, of John B. Carroll's survey of scholarship, "Language Development in Children," pp. 333–354, reprinted from the *Encyclopedia of Educational Research* (New York: The Macmillan Company, 1960). For a more recent bibliography, see William T. Griffin's general study announced by Macmillan for 1968. Russian scholars have been especially active in the field; for a survey of significant studies, mainly from the late 1950's and early 1960's, see Dan I. Slobin, "Abstracts of Soviet Studies of Child Language," in Smith and Miller above, pp. 363–396. The dialogue between the Skinnerians and the Chomskyan linguists seems to be declining; references will be found in the bibliographies and bibliographical footnotes in the works cited above.

years old. She was born in a residential section of Reno, Nevada, whereas I was living somewhat outside the city; circumstances dictated that I was to see but little of her during the first six months of her life, but since that time I have seen her every week or two in either her home or ours. Nothing that she did attracted my curiosity as a student of language until she was about a year old.[2]

She is a good-natured, outgoing, chattery child, and by that time she had learned to jabber extensively in what I take to be pure babble, incomprehensible to a second party and probably without meaning. She would babble at anyone to whom she had become accustomed. In line with my general belief that children should be treated like human beings and as much like adults as possible, I talked with her, using words and constructing sentences, since I did not trust myself to speak naturally otherwise. During this process I noticed that we were carrying on a conversation. Hanna would ask a question, in her babble sounds, which I would answer in English. Of course I did

[2] I am by no means the first to have listened intently to a relative. Apparently the most extensive report is that of Aleksandr N. Gvozdev, who kept almost daily phonetic records of his son from the infant's first cries until the boy was nine; for a summary, see Dan I. Slobin, "The Acquisition of Russian as a Native Language," Smith and Miller, pp. 129–148, which includes bibliography. For an extensive record in English, see M. M. Lewis, *Infant Speech: A Study of the Beginnings of Language,* 2nd ed. (New York: Humanities Press, 1951). These records are generally in accord—for Gvozdev I am relying on Slobin—with more recent studies which suggest that children begin generating syntactic structure after about two years, perhaps somewhat earlier. As will appear below, I am interested in the second year of a child's life. Very promising are several attempts to take systematic transcripts of small children's speech; for example, representatives of the Massachusetts Mental Health Center and Harvard University took high fidelity tapes "weekly during the first 30 months of the life of four first-born infants," and these tapes are presumably being given careful study, but the results seem not to be available at this writing. See Margaret Bullows, Lawrence Gaylord Jones, and Thomas G. Bever, "The Development from Vocal to Verbal Behavior in Children," Bellugi and Brown, pp. 101–107. Such studies are likely to profit from objectivity and from the larger number of children studied; they may suffer from the unnatural circumstances that must be inevitable when partial strangers enter a home and from the fact that a child's most significant language developments may go unrecorded in weeks of formal samplings.

not know what the question concerned, because Hanna had used nothing in these discourses that could be recognized as English words, but I postulated a subject for her question and answered as I would have answered that question under the circumstances. I would then ask her a question, a real question, to which she would reply sometimes promptly, sometimes with a show of deliberation, using the sentence patterns of what were obviously various sorts of answers in modern English.

This intrigued me, and I started listening to Hanna's speech as phonemic patterns. By this time she had acquired many of the segmented sounds of modern English, both vowels and consonants, but I observed nothing that could be called a morpheme or a word used with any consistency for any purpose.[3] Her grammatical patterns, on the other hand, were unmistakable, and she commanded all of the more common ones without hesitation and with no evidence of difficulty. Obviously she was having fun; in fact, she used her language only when she was happy. Any kind of distress led only to silence or wails, but when she was enjoying herself she could command all the sentence patterns adequate to her life. She could greet you, saying the equivalent of "Hi, Bud," or a somewhat more restrained "Hello, nice you came." She could attract attention ("Hey, see what I'm doing") and make expository observations, some of them rather lengthy and accompanied with pauses, as though she were thinking. As I have observed above, she could ask and answer questions, and she could distinguish, using pitch, stress, and juncture patterns, the differences between various sorts of imperatives. What I took to be the equivalent of "Give me a bottle" shared something with an imperative like "Notice that my sister is really very funny" but was also distin-

[3] My amateur observations here seem to be confirmed by many careful studies of sound acquisition. Perhaps the classic work is Roman Jakobson, *Kindersprache, Aphasie und allgemeine Lautgeschichte* (1941), translated in *Selected Writings* (The Hague: Mouton and Company, 1962), I, 328–401. For bibliography and a survey of scholarship, see Ruth H. Weir, "Some Questions of the Child's Learning of Phonology," Smith and Miller, pp. 153–172.

guished from it. She could even "read" a book; that is, she could chatter while turning the pages of a book, but so far as I could observe she was much less sure of herself when "reading," probably because she heard less reading than speaking and because the various members of the family who read to her did so in quite different speech patterns.

This "language" of Hanna's gave evidence of being a self-contained system, although it must have grown from the sentence patterns she had heard in her home, which would have been mainly adult patterns.[4] Her sisters are respectively some ten and twelve years older than she, of much more than average literacy for their ages; and at

[4] Here I am at variance with most previous writers, although by no means with all of them. Carroll, p. 335, apparently relying especially on Lewis and Jakobson, concludes as follows: "Despite the fact that phonetic diversity noted during the period of babbling increases considerably, these phenomena have little specific relevance for the development of true language. It is as if the child starts learning afresh when he begins to learn to utter meaningful speech." Carroll, however, noted that grammatical patterns had been too little studied among the very young, adding that "investigators . . . have almost completely overlooked such features of language as intonation patterns, which are very likely among the first items dittinguished, as Lewis has observed." Ruth H. Weir based her excellent study, *Language in the Crib* (The Hague: Mouton and Company, 1962), on observations beginning in the third year of the child's life, but in her last paper before her untimely death in 1965 she was studying smaller children; see Smith and Miller, pp. 153–172, especially p. 157. She concludes: "1. At an early stage (before the infant is about nine months old) the child shows discrimination, in a broad way, among different patterns of expression in intonation. 2. . . . at first the intonational rather than the phonetic form dominates the child's response. 3. Then the phonetic pattern bcomes the dominant feature in evoking the specific response; but while the function of the intonational pattern may be considerably subordinated, it certainly does not vanish." My own observations are quite in accord with Weir's, and, although I too noticed the apparent reduction in language use as the child begins to generate syntactic patterns, my explanation, as will appear below, differs from those of observers surveyed by Carroll. Apparently Walburga von Raffler Engel has been interested in the early acquisition of sound patterns; Professor William J. Griffin has kindly called the following to my attention: *Il Prelinguaggio Infantil* (Brescia: Paideia Editrice, 1964); "Appunti sul Linguaggio Infantil," *Scuola e Citta* (December 1964), pp. 660–663. Suggestions along these lines by Otto Jespersen, John Dewey, P. Guillaume, and F. H. Champneys were not very zealously pursued.

that time she was not regularly seeing children of her own age. So far as I could observe, her use of her language patterns was impeccable. She was never at a loss for grammatical sequences, and she seemed to use them with a high degree of consistency—granted, of course, that one did not usually know what she meant to say. Obviously, her imitative powers were very great, especially, it would seem, in her ability to reproduce pitch, stress, and juncture unconsciously. All the sounds she used in her language were involved within these patterns. Meanwhile, she was beginning to use a few words. I heard *Mommy* and *bobbu* (for bottle), but these she never used in her babble language. They were isolated cries, not much more than signs, occasioned by immediate need.

In general the situation seems clear enough. In the first year of her life Hanna had learned a considerable number of what probably amounted to segmental phonemes—at least she had learned sounds, and she seemed to use them phonemically. She was still having difficulty with many sounds she had heard, and her ability to imitate isolated sounds was limited, partly no doubt because of short verbal memory, and partly because she as yet had too little control of her tongue to make possible the sounds requiring agile and precise tongue movement. She could make combinations of sound, but it is doubtful that any sounds, whether individual or combined, represented much more than material she could put into patterns. Meanwhile, she had learned pitch, stress, and juncture with remarkable accuracy and some variety, and these included all of the common patterns that she heard regularly in her home.

During the next few months, I observed some increase in the complexity of the sentence patterns Hanna employed. She had learned simple coordination and would coordinate what appeared to be nouns, modifiers, and clauses, the latter often with pauses between them. I suspect that she was here imitating, even to the apparently thoughtful breaks, her eldest sister, a speculative youngster who would sometimes offer quite mature observations. She had learned subordination

before the noun; she could say the equivalent of *an old man,* but I did not isolate patterns like *a very decrepit, pitiful old man,* presumably because the conversation in the household did not much run to extensive subordinational patterns. Naturally, with only one adult in the home and the remaining members relatively young, Hanna heard only simple structures with any consistency, but her facility in acquisition was such that one must assume she would have learned any pattern, however complex, if she had heard it enough.

Meanwhile, Hanna's mother and her sisters were deliberately teaching her words. A sister would say, "See the kitty, Hanna. Say 'kitty.'" "Kitty." "What is that, Hanna?" No answer. "It's a kitty. Say 'kitty,' Hanna." "Kitty." That is, by now Hanna could say most brief words in immediate, direct imitation, but she could say these words only by repeating them immediately after someone. They did not enter into her language, and they were never said with the sentence patterns of conversation. She would say "kitty" with the sentence pattern that her sister had used in "Say 'kitty,' Hanna," never with the pattern "The kitty wants some milk."

During the next few months, until Hanna was nearly a year and a half old, she was developing at least four aural systems simultaneously. One answered to immediate need; limited in vocabulary and almost innocent of grammar, it consisted of cries, more or less urgent. The original *Mommy* and *bobbu* had been joined by a few others—her sisters' names, for example, along with *read* and *dinner*—but this system grew very slowly both in extent and complexity. The others Hanna had made into games, which I shall call for convenience the Whazzat Game, the Ritual Game, and the Playing Grown-up Game. The first of these games probably grew out of the "Say 'kitty'" pattern. Hanna had now learned the names of various objects around the home, particularly those that could be observed in children's books or in mail order catalogues, and during this period any adult who appeared would be set upon by Hanna, dragging a picture book or a catalogue.

To play the Whazzat Game, Hanna sat on the adult's lap—or stood nearby if she was not certain of the adult—and both looked at the book. If Hanna said "Whazzat?" the adult was supposed to name the object. If the adult pointed to a man and said, "What's that?" Hanna would answer, "Daddy," or "clock," or "fish," or whatever might be appropriate. She would reply promptly if she had a word for the object, and part of the game seemed to be to answer as quickly as possible. She used the pattern of her sister in "Say 'kitty,'" and she would do this interminably with great delight. In fact, she seemed to prefer the mail order catalogues because they permitted the interlocutor to point to twenty clocks in succession, and she could say "clock" almost instantaneously. Never, however, did she use the pattern that she would have used had she been saying "The clock has stopped." This was a game with its own rules, and it had nothing to do with either her cries in need or her babble-language, that is, with the quite separate activity which I have called the game of Playing Grown-up. She used the pattern of "Say 'kitty,'" which was the pattern associated with this game, no matter who was doing the pointing. During this game she was not averse to learning to respond to previously unknown objects, to a shotgun or a swimming suit, but clearly she preferred the same object available in many variations, so that she could respond with zealous rapidity to a series of clocks or to a sequence of clocks and daddies pointed at alternately.

Hanna's use of clues and her playing of the Whazzat Game suggest that she had as yet no working concept of vocabulary, but they also suggest that she was developing a rudimentary understanding of signs and symbols which she would later turn to use when she developed a vocabulary. In view of the paucity of her general understanding, her grasp of what she conceived to be the central idea behind a group of related and nameable objects was amazing. She could recognize a cooked fish at the dinner table, a photograph of a fish, a painting of a fish, a caricature of a fish, a fish design on an ashtray (even though it was no more than a fishlike blob), and jewelry in a

form suggestive of a fish. Presented with a fishlike form in a medium strange to her she might hesitate a bit, but she seldom missed, and she was apparently pleased with herself when she recognized a fish under a strange guise, as though this was part of the game and she was winning. This was a game using answers, and it had nothing to do with communication, but it does give evidence that Hanna had the concept of a fish as symbol, or at least as a generalized sign; and, considering the importance that linguists now attach to a symbol in the origin and growth of language, this seems to me an observation of some importance.

A set of responses somewhat similar to those in the Whazzat Game I have included in what I call the Ritual Game, although this complex was not a game in the sense represented in the Whazzat Game and the Grown-up Game. This activity was a game in the sense that Hanna had fun with it, but she did not require another player, except that she had to use an adult for the original imitation. The activity combined set phrases, apparently repeated as a ritual associated with action, especially her action. The Ritual Game was like the Whazzat Game in that it used words and linguistic patterns to accompany an action, but it differed in that it was much more varied in the patterns it employed and in that she played it alone, although she may have been acutely aware of her observers. This game was like the others in that it seemed to constitute its own system. I did not hear either the words or the patterns involved in the Ritual Game appearing in any other context; Hanna had learned them as wholes, and she used them as wholes—and only in the context with which she associated them.

For example, there is, in the living room of Hanna's home, a chair that rocks so readily that, if rocked hard enough, it will go over backward, dumping a frightened Hanna on the floor. This chair, perhaps because it seemed to be playing a game with her, intrigued Hanna, so that she would frequently try to climb into it, whereat her mother would say, "Careful." Soon Hanna was saying "Careful," with her

mother's pitches and stresses, whenever she climbed into the chair. Of course she was not being careful, and she seemed to have no notion of what *careful* was intended to imply. To her, *careful* was the accompaniment of scrambling into that chair, repeated with the tones she had learned, as a sort of ritual. Similarly, when she fell down, her



mother would say, "oh-oh," /o ə/, in the hope of suggesting that this was no more than an amusing joke, nothing that warranted weeping calculated to gain sympathy. Soon Hanna was saying "oh-oh," with her mother's pitch and stress, whenever she fell down.

Thus this version of the Whazzat Game was providing Hanna with slight variations upon patterns she already knew, and in association with words, although she did not necessarily understand these words. As soon as it had occurred to me that I was observing activities of some linguistic interest, I made my gesture to science by taking tapes of Hanna's speech. To distract her and also to keep her near the microphone, my wife called Hanna's attention to the revolving reels and said, "See. It goes round and round." Hanna took this up at once, saying "round and round"—although she reduced it to *ronaron*—with the stress, pitch, and juncture my wife had used in saying "It goes round and round." This became the family name for a tape recorder, and Hanna associated the name with the whole object. She would start pointing and shouting *ronaron,* still using the speech pattern my wife had used in a sentence, whenever I got out of the car carrying the tape machine. Clearly she did not associate *round and round* with the action of the reels and was somewhat disturbed when the cover was taken off the machine and placed in another part of the room, since there now seemed to be two round-and-rounds.

Meanwhile, Hanna had continued her imaginary conversations in what I have called the Playing Grown-up Game, and I so name it because, although without any real proof, I conceive that this activity was direct imitation of what she supposed adults were doing. I have the impression that she associated me particularly with this game; at

least she would seize upon me and we would start playing the game at once. No doubt her mother and her sisters had to endure a good bit of this sort of thing, and they probably occasionally evinced their boredom—after all, they were exposed to it much more than was I, and they did not have my reasons for listening to apparently meaningless chatter. By now Hanna was "talking" more volubly, I assume because she was gaining better control of her vocal mechanisms, and partly because she remembered me better—when she was younger, if I happened not to see her for a couple of weeks, she had apparently forgotten me. Her sounds were increasing somewhat, but I made no careful analysis of these sounds since that subject has already been well researched. The complexity of her sentence structure had apparently increased, but I have inadequate evidence to say very precisely how the patterns were developing, although one could notice that both coordination and subordination were more extensive.

What struck me was that she was now learning grammar relatively slowly, compared with the rapidity with which she had learned it during the first twelve months of her life. In that period she had learned all the basic patterns, but in the next six months, during which her use of sounds increased rapidly, she seemed to be learning relatively few new patterns. She may have been learning more grammar at this time than appeared, but if my conclusions are valid I must assume that she was now hearing few sentence patterns she did not already know, that the new ones she did hear appeared infrequently enough so that they did not much impinge upon her, and that, in any event, she already had most of the patterns that would have seemed to her to be any good. The other patterns she heard were not needed in either her cries or her games.

Perhaps the most notable development was that although Hanna was by now beginning to link vocabulary associated with her cries with vocabulary that was growing out of the Whazzat Game and its variations, I could detect no influence of either of these upon the Ritual Game or the Playing Grown-up Game. I did not during this time

hear her say anything in the Grown-up Game suggestive of the words she used as cries, as part of a ritual, or as replies in the Whazzat Game.

Shortly before Hanna was two she began fusing her various aural systems into one and associating this one system with a true understanding of language. Words from the Whazzat Game or from her cries would now occasionally appear in the Grown-up Game, usually with some hesitation. Why she hesitated I am not sure; she may have felt unsure of herself, or she may have doubted the propriety of introducing part of one game into another; in support of this last thesis I note that she was uncommonly sensitive to any adverse comment; the mildest word of rebuke would so chasten her that she would lie down on her stomach and shut out the world by hiding her face.

At about twenty months, her mother reported that Hanna had generated her first sentence, "See the flower." I doubt that she was as yet using grammar in association with words she had learned. I did not hear her doing so then, but I have many times heard her sisters, in a laudable attempt to promote a sense of beauty, saying "See the flower, Hanna." I suspect that this "sentence" is of a piece with "careful" and "oh-oh," a ritual to be performed under certain circumstances. I was not so fortunate as to hear this locution, but I would be fairly confident that it was uttered with the pedagogical pitch patterns of Hanna's older sisters, not with the conversational patterns she used when playing the Grown-up Game.

By the time Hanna was two her "sentences" had greatly increased in number and variety, if not much in length. I suspect that most of them were still imitations of locutions she had heard, with the pitch patterns associated—"go bed now," "go pottie," "have dinner"—and by now apparently the sentence patterns she had used in the Grown-up Game were coalescing with the words she had learned in her cries, since now the cries used some of the Grown-up Game patterns. At some time during this period, the last few months before she was two, so far as I could observe, Hanna did begin to generate sentences. The grammar was very simple, and one did not always know what she was

saying. An initial sound plus a word with the interrogative pattern might be intended for "Is it yellow?" "It's yellow?" "It yellow?" "Is yellow?" or something else, but clearly she now had the concept of vocabulary and grammar as the ingredients of communication. That is, she had developed the essential concept of language.[5]

In the subsequent months—my subject is, at this writing, somewhat more than two and a half—Hanna has grown rapidly in linguistic sophistication. By now she has a considerable vocabulary, and she is addicted to observations that convulse the family. She has ceased entirely to play the Grown-up Game: just when, we are not sure. The family, of course, was interested in her learning to talk, not in her ceasing to babble, and it is easier to notice when things start than when they stop. All the family agrees, however, that she has not played the game for some months. Her mother confirms my impression that she went on playing the game a little when she was tired or frustrated, and this indulgence continued somewhat after the time when she had played it at every opportunity. I assume she wanted to do something with adults but could not quite face the problem of using words.

Meanwhile, her other baby games declined, although with no consistency. For a time she played the Whazzat Game with continuing zeal and growing competence. Her identifications speeded up, and she apparently used "Whazzat" more frequently because she wanted the information more than she had earlier. Now, however, she plays Whazzat less frequently and is apparently trying to learn

[5] The timing here accords with that of many observers whose collection of material was more systematic than mine. Hanna started generating sentences relying exclusively on words in her third year, perhaps a little earlier. This period was marked by an apparent reduction of her use of linguistic activity, but I suspect that this reduction is more apparent than real, that she was fusing her various sorts of linguistic activity into a new game that was genuine language, with which she did not as yet feel sure of herself. I doubt, as other observers have suggested, that she was learning all over again. I suspect that she continued to learn, but she used her linguistic abilities less, in audible form, because she was now outgrowing the linguistic complexes in which she had an easy competence and was combining her linguistic skills in a way not as yet second nature to her.

to read. She will still present any visitor with a book or magazine, but if I try to play the Whazzat Game with her she loses interest. As for her cries and her ritualistic expressions, they blended readily with the patterns used in the Grown-up Game, and if there was any marked change here I did not notice it.

Thus, by the time Hanna was two and a half she seemed to be a normally bright child uncommonly precocious in her command of language. I suspect that this precocity is rooted more in her surroundings than in her genes. She is intelligent, and her parents are both intelligent and literate, but neither has special interest in language. On the other hand, she grew up among people who were reading; her sisters were in school and dutifully did their homework, and her mother returned to college when Hanna was a few months old. To Hanna, one definition of an adult must be a person who sits and turns the pages of a book, and she does this habitually.

I suspect also that the conditions in Hanna's home were unusually conducive to language learning, albeit they were not governed by that purpose. Most of Hanna's learning was associated with love, happiness, and fun. She would cry out "Mommy" if she was in desperate need, or if she was tired and thwarted she would seek comfort by calling for her bottle, but most of what we must call elementary language learning was associated with happiness and especially with having fun. Anything that upset her—a rebuke, fear of a stranger, a sense of tension in the family—produced either a wail or silence. Except for the limited language learning associated with her cries, Hanna used the elements of language only when she was happy, and apparently especially when she could make linguistic phenomena into a game she could play.

Now we should ask ourselves how typical Hanna's linguistic experience has been and what can be inferred from it.[6] She is certainly

[6] Obviously, for scientific purposes, my observations suffer from being limited to one informant and from the need of a large corpus of precisely recorded evidence. But all sets of observations to date suffer in these areas or from the evidence having been recorded among unnatural speech conditions.

not an average child; her grandmother believes she is a genius, and if her grandfather is somewhat more skeptical, obviously she is more than normally intelligent. Her household is probably unusually conducive to language learning. Everyone in it is interested in education, but more important, I suspect, everyone in it is loving and kindly. She has never been shouted at or beaten or terrorized by seeing other people fight. When she must be punished she is punished gently and she is made to feel that everyone loves her, although she has been a little naughty. To her, I suspect, the world is an interesting place, and not more terrorizing than a strange world must be to a small child; adults are creatures who can be expected to play with her, be interested in her, and love her. Her mother is a gentle, charming woman and her sisters are unusually good to her. Obviously, most of the hours of her day she is happy, which means that she has had much more time for language learning than would have been hers if she had been unhappy most of her days. Furthermore, she has had plenty of time to practice her language, to develop command of her tongue, to learn sentence patterns.

Thus, Hanna's case is, however unfortunately for the human race, not average, but we may learn from the exceptional cases as well as from the average ones, and I suspect that Hanna's case is revealing, perhaps unusually revealing. Since I am more interested in pure than in applied linguistics, I surmise that we can learn something from Hanna about the nature and history of language. Here I recall that we have never been able to agree upon the origin of language; we have devised many possible origins for language or parts of language: that it started from cries of need or fear, from imitation of natural sounds, from the rhythm of bodily movements, from the desire to have fun making noises, and the like, but none of these seems to account for all of language or to be such a good explanation that it has displanted all the others. Now, observing Hanna, I am constrained to wonder if we have failed to find the origin of language because it never had a single origin but resulted from the coalition of various activities,

each non-linguistic or semi-linguistic in character. Of course we cannot be sure that ontogeny repeats phylogeny, that the experience of the individual reflects the experience of the race, but we do have evidence that something of this sort is true, and certainly language in Hanna developed only some time after she had learned sound as cries, sound as ritual, and sound as various sorts of fun. Hanna may be, among other things, a toddling explanation of the origin of language.

However that may be, the evidence would appear incontrovertible on one point: Hanna learned sentence patterns before she learned words, any words, to say nothing of most words. That is, she learned grammar before she learned vocabulary; she had learned grammatical structures before she had anything but nonsense syllables with which to flesh those skeletons. She started learning grammar earlier than she started to learn words, and she learned it so much faster than vocabulary that her rate of grammatical learning soon declined, apparently because she found little more to learn.

Normally, just the opposite has been assumed. Most of the studies of children's learning of syntax have started after the subjects were two years old.[7] Apparently the assumption was that a child could not learn grammar until he had words to talk with, and this thesis seemed

[7] The exceptions have been few; Jakobson noticed the pitch pattern of the question in the second year, and that the subject-verb-complement pattern was learned by the twentieth month; I have mentioned Weir above, and there are some others (see note 4 above). The usual approach, however, is that found in Wick Miller and Susan Ervin, "The Development of Grammar in Child Language," Bellugi and Brown, pp. 43–79, who start with children aged two years, one month and two years, three months and describe the results as delineating "the first grammatical system." Quite probably the competence in language that develops during the third year is the first to embody what can be properly called a "grammatical system," but I submit that the learning at that age is not the first grammatical learning. The usual approach is that of Slobin in *The Origins of Man,* transcript of a symposium sponsored by the Wenner-Grenn Foundation for Anthropological Research, Inc., ed. Paul L. VeVore (distributed through *Current Anthropology*), p. 72, who said, "We cannot speak of grammar in child language until the emergence of two-word utterances," and this would seem to be sound if we accept the term *grammar* in the sense in which Slobin is apparently using it.

to gain confirmation in the fact that children learned isolated words before they could combine these words into sentences, and when the child did form sentences he formed them with the simplest grammar, even with imperfect grammar. Thus "See kitty" was likely to precede "I can see the kitty." This sequence seemed logical, also, in that grammar was conceived to be more difficult than vocabulary. Obviously, once a child has mastered most sounds and has caught the trick of handling semantic concepts, he can learn vocabulary quite rapidly, whereas grammar, at least in the limited sense of usage if not in the larger sense of language structure, continues to plague youngsters for many years, particularly the linguistically underprivileged. Of course all this is logical only if we assume that the child is trying to learn to talk. It does not make sense if we assume that the child is having fun, trying to please his elders, or indulging his genius as a born mimic. It makes sense if we assume that the child learns his first words in grammatical context, a grammatical context that is usable in language. It does not make sense if we realize that the child learns words like *Mommy* and *kitty* in a grammatical context that is no good to him. A year-old child is not in a position to demand, "Say 'Jehosaphat,' Mommy." Apparently the child learns words in context, and, since his first words are learned in a context he cannot himself use, he seems to learn only the words.

This theory of mine, that children learn pitch, stress, and juncture, along with the more individual voice patterns which we might call tone, much earlier and more easily than they learn segmental phonemes and morphemes, gains some confirmation from the learning processes of animals. Anyone who has observed a cat or a dog carefully, and especially anyone who has trained such an animal observantly, must have noticed phenomena very similar to those I recorded for Hanna. A cat or a dog may learn its name and perhaps a few other words like *kitty, sic'em,* and *heel,* but not many. On the other hand, the pet will learn its master's pitch and tone very precisely, and any change in these will change the command or render it meaningless.

In fact, most of the words that a pet seems to learn are probably only the accompaniment of a tone pattern; a dog that has learned *heel* is likely to respond as well to *feel* or *peel* or *keel* but will ignore the word *heel* if it is said with a diphthong, a rising inflection, or a sing-song. That is, animals as well as babies learn grammatical patterns, and they use them, as the small child does, as a means of understanding, but for whatever reason, physical or psychological, they do not use them for creative purposes.

As a sort of corollary, one can notice that Hanna learned grammar more accurately as well as earlier and more adequately than she learned vocabulary. The sentence patterns she had learned with great skill and confidence before her first birthday, and so far as I could observe she never had to revise them. On the other hand, more than a year later she was still pronouncing quite inadequately—the tape recorder has remained to this day a *ronaron*—and although she is now learning vocabulary very rapidly she has constantly to refine the uses of the words she knows. When the Christmas tree was put up and loaded with presents she called it a *happy birthday,* since she apparently had forgotten her earlier Christmases but had more recently become aware of parties at which gifts were given and people said "happy birthday." Presumably, she had no grasp of concepts associated with *birth, birthday,* or even with *happy.* Two days later she was no longer calling the object a *happy birthday* and had substituted the word *tree,* a word she knew already and one for which she had associations, but she was having trouble calling it a *Christmas tree,* although she knew the word Christmas and could use it in some contexts.

Certainly, Hanna's learning of language suggests something about the nature of language learning and something of our jobs as teachers of language. Apparently, happiness and playfulness are essential ingredients of language learning; fear and embarrassment mainly inhibit it. Pretty obviously, language learning can be enhanced by providing more happy homes, and if that fact seems to shift the duty of

language teaching handsomely from our shoulders to those of the parents, one can observe that we may not be able to influence parents much, but that we are responsible for at least part of what happens in classrooms. If a boy hates his father or lives in fear of being stabbed while going to school, he may not be learning much language, and we may not be able to help much, but at least we can make it easy for him to play games with language; we can remind ourselves that we are likely to teach John and Mary more by encouraging them to use language and even to play with it than by scolding them and making them embarrassed because of their ineptitudes.

We might recall also that Hanna learned most of her language in some kind of context. She learned it as games, she learned it as ritual, and, if she was deliberately taught language, she still learned it in context, although usually it was an erroneous context. This certainly suggests to us what we should guess on other bases as well, that language is learned naturally in context, that it probably is learned best or at least most easily in context and in conjunction with something else, and that we should be consciously concerned with teaching incentives and means to language.

We might notice, also, that Hanna did her best language learning without help. Her parents never consciously taught her sentence patterns; in fact, I have never known a parent who did, not even the proudest or the most demanding. Such patterns as she learned from the deliberate teaching of adults may have done her more harm than good, although not much harm—Hanna saw to that. Telling her to "Say 'kitty,' Hanna," taught her a pattern that was no good to her, but she readily got rid of anything she considered useless. On the other hand, the adults and older children surrounded Hanna with excellent conditions for learning language; she heard adult conversation, she was talked to and listened to, and people would play games with her, any game she wanted. She was loved and kept relatively happy. Perhaps no better school of language learning could have been devised. Hanna's mother and her sisters could not have taught Hanna

to speak. Probably no human being knows enough to teach another to speak, and, if there are such conversant experts, certainly they do not number many average siblings, or even super-siblings, among their ranks. But Hanna did not need teaching; all she needed was a chance to learn, and, when she learned, she had to learn in her own way, in a way that neighboring adults could not be expected to understand but were ready to foster, just by being nice people.

All this leads me to my moral, which is an observation current among teachers and professors of education but less extensively enshrined in conduct than I could wish. It is this: We should ask ourselves what is our business as teachers and what is not our business. So far as Hanna was concerned, no one needed to teach her elementary sentence patterns. Given a reasonable opportunity, she would learn them gleefully without any help. The fact that a teacher probably could not have taught Hanna these patterns is beside the point; there was no need to try. A teacher needed only to put Hanna in a position to learn. That was the best teaching and probably the only teaching that would have been much good. But how about Hanna at four, at six, at eight, at fourteen, at twenty? What can we trust Hanna to do without our help at those ages, and what should we be doing that Hanna cannot do well, or perhaps not do at all, without our help?

Here, I believe, we need to notice some peculiarities of language and of the learning of language. Learning the native language is the most important intellectual job common to all mankind, but it differs from most other educational activities. Within limits it is physical; learning to speak requires learning to control the breath, the movements of the vocal cords, and especially that subtle and very difficult complex of muscles, the tongue; but learning to perform these actions seems not to be inherent in an infant as is the ability to learn to walk. Such evidence as we have of children who have grown up without human companionship suggests that they do not naturally learn the techniques of language. On the other hand, language learning differs most from intellectual studies in that it is mainly unconscious. All

children learn to talk, whereas no child learns chemistry or physics or even history—at least not much of it—except consciously.

In other words, language learning differs from other learning in that (except in its very early stages) it is essentially an intellectual activity, in that it is mainly learned unconsciously (partly by imitation and partly by generalization), and in that much of it can probably best be so learned. This does not, however, mean that language cannot and should not be taught. Even though most language learning is unconscious, learning language well is extremely difficult, and, even after we have observed that much language learning can be ignored by the teacher because it can be left to the imitative and generalizing powers of the child, we must still recognize that a very large residue of language learning must apparently be conscious or consciously directed. Here the teacher finds his role, and a very important one it is. So far as we know, no one has ever learned to use language well without long and exacting schooling, usually self-discipline enforced by formal training.

But what should this training be? Obviously, it need not be concerned with what the learner can do for himself and probably can do best and most economically by himself. No one needed to teach Hanna the basic sentence patterns; true, she might later need an understanding of the relationships of these patterns to become consciously aware of their uses in order to employ them as a foundation from which to construct deliberately patterns she had not learned unconsciously, but the teacher need not waste Hanna's time or society's money teaching her what she had already learned. On the other hand, Hanna did not learn complex sentence patterns, but there will come a time when she will need them, and if she is to play any important part in the modern, complex world she must learn them, both to read sophisticated prose herself and to write with the fine distinctions required by modern society.

What could Hanna be taught profitably? She loved to learn sentence patterns, but apparently she stopped learning them because she

had learned all she heard, or heard very much, and hence had no new ones to imitate. But why should she not have learned the complex patterns she would later have occasion to use? Since I am no preschool teacher, I shall not endeavor to decide how this could or should be done, but even a layman can suggest some devices worth trying. Why should not Hanna have listened to a tape on the *ronaron* which would, let us say, repeat a portion of Lincoln's Gettysburg address over and over, played of course for brief periods but at frequent intervals? Once she came to recognize the passage—and she would do so very quickly if it were always repeated with identical pitch, stress, juncture, and tone—she would be delighted at every repetition of it. Soon some of the complex patterns of sophisticated speech would have been engraved deep in Hanna's conscious or unconscious mind, or whatever it is in human beings that makes language learning possible. This may not be the best way to help small children learn, but I am confident that a little experimenting and testing will produce better means of utilizing the crucial early years of a child's life, if the procedures are based upon an understanding of how small children learn language.

The same principle can be applied at other age levels, in the elementary schools, in the secondary schools, in the colleges and universities. Yet most of the English teachers I know have not seriously asked themselves what it means for their teaching that most use of the native language is learned without any of their help. What, at the level they are teaching, can they leave to the imitative powers of the young people themselves, and what must be taught by the teacher if it is ever to be learned at all, or at least if it is to be learned economically? In my own case I am sure I have learned, during the past ten or fifteen years, some use of language that I might have learned earlier, and that I have learned slowly and arduously what I could have learned better and with ease forty or fifty years ago if my teachers had genuinely understood their jobs.

This is not to suggest, of course, that I understand their jobs, or

even my own, but it is to suggest that every teacher of English should ask himself seriously at least these three questions:

1. Do I understand how language works and how it is learned?
2. What can I trust my students to learn without my help?
3. What can I do to help my students learn what they need most?

Obviously the answers will vary in various social groups and at various grade levels, but, as some evidence that I take my own admonitions seriously, I shall report briefly a little experiment I ran in connection with a course in composition at the freshman college level. I had assigned a recent speech for study, found that the students could not understand it, and endeavored to find out why. I soon satisfied myself that the students were lacking in vocabulary and in a working knowledge of complex sentence patterns. Trying to discover more specifically how these areas of ignorance impeded them, I gave them various paragraphs and asked them to summarize each paragraph in a few sentences. The following is one of the paragraphs, from Herbert Muller's *The Uses of the Past*:

> Ultimately, both the glory and the tragedy of Israel sprang from the exalted, inhuman conviction that they, and they alone, were God's chosen people. Chosen peoples are not apt to make good neighbors. Their refusal to make peace with their Greek neighbors and their Roman rulers could be high-minded and heroic, or it could be narrow-minded and perverse. Often it was plain fanaticism. The chosen people resented the tolerance and humanism of Hellenistic civilization as fiercely as they resented its immorality and paganism. When the ruthless, able, statesmanlike Herod the Great restored the glory of Palestine, they could forgive his brutality but not his alien birth or his fondness for Greek culture. When they were exploited by their own rich, priestly aristocracy they were docile—until the aristocracy grew friendly with the Greeks. "As has always been the case in the East," writes Kirsopp Lake, "the people submitted to extortion but rebelled against civilization." And in their periodic uprisings their Zealots were as brutal as their rulers, massacring thousands of Gentiles, and murdering many of their fellow-Jews who opposed their violence. In general, the people were incapable of the humble, chari-

> table attitude implicit in the teaching of their greatest prophets. The history of Israel, like the history of Christian Europe, suggests that no nation and no sect can afford to regard itself as the elect of God.[8]

As a result, I got no answer that I, if I were Professor Muller, would have accepted as a fair summary. Here is one and, as a matter of fact, not one of the poorer:

> The Hebrews became the great people they are today because they were the chosen people of God. Since they were the chosen people they were exalted, and they were good neighbors, and they hated immorality and paganism. They opposed violence, but they were subjected to brutal rulers. History has rewarded them because they were tolerant and humble.

I trust I need not labor the point that although this answer shows some resemblance to Muller's paragraph it comes to almost an opposite conclusion. How did the student manage to do this?

The first sentence is rather long and has a somewhat complex structure. Apparently the student could not find his way through it, but he picked up some phrases familiar to him, *exalted* and *God's chosen people*. His background being what it was, he assumed that the *exalted* described *God's chosen people,* which seemed to make sense, and he did not notice that the *exalted* actually modifies *conviction,* a concept which he probably did not understand very well, especially taken in connection with the notion that this conviction was *inhuman.* The student apparently thought that he now knew what the paragraph would say. Accordingly, he glanced through the next sentence and picked up the familiar phrase, *good neighbors,* and, since it would be inconceivable to him that God's chosen people would not be good neighbors, he just did not see the word *not* at all, or he ignored it as something inexplicable. Now the student encountered a series of sentences, all rather long and complicated; clearly he did not understand them, but he picked up words like *immorality* and *paganism,* along with phrases like *opposed violence* and *brutal rulers.* These

[8] Herbert J. Muller, *The Uses of the Past.* Used by permission of Oxford University Press, 200 Madison Avenue, New York, N. Y. 10016.

seemed to fit nicely into what he assumed the paragraph said and, since he now trusted he had enough to make a good answer, he wrote his summary.

What was the young writer doing here? He was not reading at all in the sense that he was laboriously working through Muller's sentences, finding out exactly what each one says, and then proceeding to the next sentence. Whether he was the victim of some speedreading course, or whether a well-intentioned teacher had taught him to skim, he was picking up words he recognized and could assume were key words. He then thought on the basis of these words whatever he already believed or would be likely to guess. Now, one should notice that in a well-built paragraph, such as those Muller writes, every sentence is likely to rely upon a previous sentence or paragraph or some concept clarified in them. Accordingly, if a reader misunderstands one sentence, he is likely also to misunderstand the next sentence, and, even if he misunderstands each sentence by only twenty percent, sentence by sentence he gets progressively farther from what the author meant to say, so that he will soon be approaching zero comprehension, which most of my students managed to do with great celerity.

An investigation of this sort may not be entirely revealing, pedagogically. Mine, I fear, was not. It suggests that my students are not likely to progress very rapidly; they need to be familiar with more words and they need to be able to work comfortably with complex sentence patterns, and both of these skills would no doubt require long-term development. At the least, however, I felt I had some deepened insight into the source of their troubles and I thought I knew better how to invest my time with them.

That my students were typical seems to gain confirmation from all sorts of sources. The following tale may be apocryphal, or it may be at least exaggerated, but I feel confident it is revealing. I use it in the form printed by Bennet Cerf in his column, "Try and Stop Me."

> To prove how inaccurately people listen, or read, Pollster George Gallup tells of a Congressman who chided the Department of Agricul-

ture for the trashy, useless pamphlets it publishes at the people's expense. "Seems like you fellows print every last thing about nature," he complained, "but the love life of a frog!"

Promptly, six letters arrived in the next two days asking for copies of "The Love Life of a Frog." Others followed in such profusion, the Department felt obliged to state in a circular, "We do NOT print 'The Love Life of a Frog.'" The result of this procedure was such a flood of new requests that the Secretary of Agriculture got into the act personally.

"Confound it!" he thundered on a nation-wide radio program, "This Department never has printed 'The Love Life of a Frog,' and we never even want to hear about 'The Love Life of a Frog' again!"

The next day there were over four hundred requests in the Department's mail.

Now we should remind ourselves that the people who ordered copies of this nonexistent study of the emotional experiences of *Rana pipiense* had mostly been through our classes, many of our classes. Obviously, they cannot or do not read. What should we have taught them that we did not? I am by no means certain I know the answer, but I am confident that we shall come closer to appropriate answers than we often do now if we as teachers will take account of the nature of language and of language learning when we ask ourselves what our business is.